

Substitute Form PTO-1449 (Revised) C10 NOV 10 2003 Information Disclosure Statement by Applicant (37 CFR 1.13(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. <u>12406-007002</u>	Application No. <u>110/623,819</u>
		Applicant <u>Klaus Höhn et al.</u>	
		Filing Date <u>July 21, 2003</u>	Group Art Unit

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA						

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation
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	AB	49-1221		Japan			
	AC	5-152609		Japan			X
	AD	7-99345		Japan			X
	AE	54-41660		Japan			
	AF	52-45181		Japan			
	AG	49-112577		Japan			
	AH	50-43913		Japan			X
	AI	47-17684		Japan			
	AJ	46-7462		Japan			
	AK	4-63162		Japan			
	AL	5-63068		Japan			
	AM	59-50455		Japan			
	AN	8-7614		Japan			X
	AO	2,927,229		Japan			X
	AP	4-63163		Japan			
	AQ	1,332,462		Great Britain			
	AR	63-280467		Japan			X
	AS						
	AT	69013615.2		Germany			
	AU	0486052A1		EP			
	AV	2835184C2		Germany			
	AW	1,589,964		Great Britain			
	AX	2053953		Great Britain			
	AY						

Examiner Signature

Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in next communication to applicant.

12/15/04

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))		Applicant Klaus Höhn et al.	
		Filing Date July 21, 2003	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
O	BA	4,495,514	Jan 22, 1985	Lawrence et al			
	BB	4,734,619	Mar 29, 1988	K. Havel			
	BC	5,369,289	Nov 29, 1994	Tamaki et al			
	BD	5,602,418	Feb 11, 1997	Imai et al			
	BE	5,652,438	Jul 29, 1997	Sassa et al			
	BF	5,656,832	Aug 12, 1997	Ohba et al			
	BG	5,670,798	Sept 23, 1997	J. Schetzina			
	BH	3,699,478	Oct 12, 1972	Pinnow et al			
	BI	4,298,820	Nov 3 1981	Bongers et al			
	BJ	4,727,283	Feb 23, 1988	Van Kemenade et al			
	BK	3,453,604	Jul 1, 1969	Geusic et al			
	BL						
A	BM	3,654,463	Apr 4, 1972	Geusic et al			
	BN	3,819,974	Jun 25, 1974	Stevenson et al			
	BO	3,942,185	Mar 2, 1976	J. Lebailly			
	BP	4,146,790	Mar 27, 1979	Goetzberger et al			
	BQ	3,691,482	Sept 12, 1972	Pinnow et al			
	BR	3,573,568	Jun 18, 1969	Harvey V. Siegel			
	BS	4,262,206	Apr 14, 1981	Viehmann			
	BT	4,173,495	Nov 6, 1979	Rapp et al			
	BU	3,510,732	May 5, 1970	Robert L. Amans			
	BV	3,529,200	Sept 15, 1970	Ralph M. Potter			
	BW	5,471,113	Nov 28, 1995	DeBacker et al			
	BX	4,716,337	Dec 29, 1987	Huiskes et al			
	BY	4,550,256	Oct 29, 1985	Berkstresser et al			
	BZ	6,078,063	Jun 20, 2000	Nakamura et al			
	BAA						

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	12/15/04
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Substitute Form PTO-1449 (Modified) NOV 10 2003 U.S. PATENT & TRADEMARK OFFICE (37 CFR 1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Horn et al.	
		Filing Date JULY 21, 2003	Group Art Unit

U.S. Patent Documents

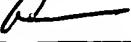
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
Q	CA	5,184,114	Feb 2, 1993	Brown			
	CB	4,818,983	Apr 4, 1989	Hara et al			
	CC	4,431,941	Feb 14, 1984	Roy et al			
	CD	4,599,537	Jul 8, 1986	Yamashita			
	CE	5,035,513	Jul 30, 1991	Fehrenbach et al			

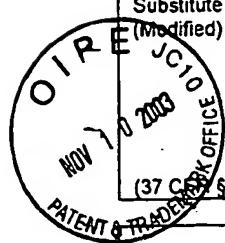
Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	CF						
	CG						
	CH						
	CI						
	CJ						

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	CK	
	CL	
	CM	
	CN	
Q	CO	Siemens Components 29.7/8 1991, pp. 147-149
Q	CP	Drafts of the Society for the Study of Fluorescent Materials, pp. 5-14
Q	CQ	Decision on Trial 11520/90 concerning JP5-152609
	CR	
Q	CS	Applied Physics Letters, "Candela-class high-brightness InGaN/AlGaN double-heterostructure blue-light-emitting diodes", March 28, 1994, 64 (13), pp.1687-1689
Q	CT	J. Applied Physics, "Large-band gap SiC, III-V nitride, and II-VI Zn-Se-based semiconductor device technologies", August 1, 1994, 76 (3), pp.1363-1398
Q	CU	J. Vac. Sci. Technol., InGaN/AlGaN blue-light emitting diode", May/June 1995, A13 (3), pp. 705-710

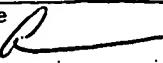
Examiner Signature 	Date Considered 12/16/04
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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))		Applicant Klaus Höhn et al.	
		Filing Date July 21, 2003	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	DA	
C	DB	Physical Review, "Frequency Upconversion in $YF_3:Yb^{3+}, Tm^{3+}$ ", April 15, 1971, B3 (8), pp. 2698-2705
C	DC	J. Applied Physics, "Efficiency of Red, Green, and Blue Infrared-to-Visible Conversion Sources", April 1971, pp. 1958-1960
O	DD	English abstract of Japanese Laid-open Patent 10-179471, July 17, 1989
	DE	
C	DF	English abstract of Japanese Laid-open 07-099345, April 11, 1995
	DG	
O	DH	Translation of Japanese Laid-open Patent 08-7614, January 12, 1996
C	DI	Osinski, Marek, AlGaN/InGaN/GaN blue light emitting diode degradation under pulsed current stress, Applied Physics Letter, August 12, 1996, pp. 898-900
	DJ	
C	DK	D.J. Robbins: "The Effects of Crystal Field and Temperature on the Photoluminescence Excitation of Ce^{3+} in YAG", J. Electrochem. Soc.: Solid State Science and Technology 1979, Vol. 126, No. 9, pp. 1550-1555
O	DL	Glen A. Slack et al.: "Optical Absorption of $Y_3Al_5O_12$ from 10- to 55000-cm Wave Numbers", Physical Review, vol. 177, No. 3, January 15, 1969, pp. 1308-1314
O	DM	Shuji Nakamura et al.: "The blue laser diode: GaN based Light emitters and lasers", Springer Verlag, Berlin, 1997, pp. 216-219, 328
O	DN	G.. Blasse et al.: "A New Phosphor for Flying-Spot Cathode-Ray Tubes for Color Television: Yellow Emitting $Y^3Al_5O_12-Ce^{3+}$ ", Applied Physics Letter, Vol. 11, No. 2, 15, pp. 53, 54
	DO	
O	DP	B.M.J. Smets: "Phosphors Based On Rare-Earths, A New Era in Fluorescent Lighting", Materials Chemistry and Physics, 16 (1987), pp. 283-299
	DQ	
O	DR	Cheo et al.: "White Light Emitting glasses", Journal Solid State Chemistry, 1991, pp. 17-29
	DS	Sato et al.: "Full Color.....Diode", Jap. J. Applied Physics, Vol. 35, (1996), pp. L838-L839
O	DT	Siemens Forsch. - Entwickl. - Ber. Bd (1997), No. 3, p. 162 [Siemens Research and Development Reports], Vol. 6
O	DU	S.N. Mohammad et al.: "emerging gallium Nitride Based Devices", Proceeding of the IEEE, Vol. 83, No. 10, October 1995, pp. 1306-1355

Examiner Signature 	Date Considered 12/15/01
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

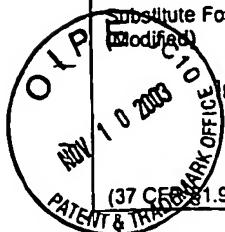
Substitute Form PTO-1449 (Modified) EJC/10 MAY 10 2003 PATENT & TRADEMARK OFFICE (37 CFR 1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Klaus Höhn et al.	
		Filing Date July 21, 2003	Group Art Unit

Foreign Patent Documents or Published Foreign Patent Applications							
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
	EA						
	EB						
	EC						
	ED						
	EE						
	EF	198585/1996		Japan (translation only)			X
	EG	244339/1996		Japan (translation only)			X
	EH	245381/1996		Japan (translation only)			X
	EI	359004/1996		Japan (translation only)			X
<i>C</i>	EJ	0936682	08/18/1999	EP			

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
<i>A</i>	EL	5,019,746	May 28, 1991	Merg			
	EM	5,120,214	June 30, 1992	Tokarlin			
	EN	3,593,055	July 13, 1971	Geusic			
	EO	5,535,230	July 9, 1996	Abe			
	EP	3,932,881	Jan 13, 1976	Mita			
	EQ	5,959,316	Sept 28, 1999	Lowery			
	ER						

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
<i>C</i>	ES	Translation of Japanese Laid-open Patent 50-43913, April 21, 1975

Examiner Signature <i>C</i>	Date Considered 12/15/04
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	



Substitute Form PTO-1449 Modified	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Klaus Höhn et al.	
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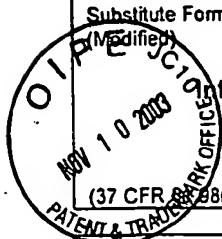
U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
O	AAA	5,744,233	04/28/1998	Opitz et al.	428	328	

Foreign Patent Documents or Published Foreign Patent Applications							
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
O	AAB	2-138361	05/28/1990	Japan			Yes
O	AAC	49-24355	03/04/1974	Japan			Yes
O	AAD	64-071053	03/16/1989	Japan			Yes
	AAE						
	AAF						

Other Documents (include Author, Title, Date, and Place of Publication)							
Examiner Initial	Desig. ID	Document					
O	AAG	Hakkoutai Dougaku-Kai (ed.), "Keikoutai Handbook" (Handbook on Fluorescent Materials), 1 st edition, published December 25, 1987, pp. 275-277.					
O	AAH	Nikkei Sangyou Shimbun (Nikkei Industrial Newspaper), September 13, 1996, first sheet, "White LED lamps"					
O	AAI	Translation of June 5, 2001 Office Action in Japanese Patent Application 10-514190.					
O	AJ	Preliminary Decision on Demand for Trial of JP 2,927,279					

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Substitute Form PTO-1449 (Modified) Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/1623, 819
		Applicant Klaus Höhn et al.	
		Filing Date July 21, 2003	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA						
	AB						
	AC						
	AD						
	AE						

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation Yes No
	AF						
C	AG	JP 2-91980	03/1990	Japan	33	00	Yes
	AH						
	AJ						
	AJ						

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
G	AK	Product Information - Philips Lighting, Fluorescent Powder, 1990
	AL	
C	AM	Translation of the newspaper "Nikkei Sangyo Shimbun", issued on September 13, 1996, <u>White-LED Lamp Efficient Light Emission Half a Production Cost</u> , Nichia Chemical
G	AN	"Phosphor Handbook", Ohm 1987, S. 166-175, 268-276.
	AO	
	AP	
	AQ	
	AR	
	AS	

Examiner Signature 	Date Considered 12/16/04
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Substitute Form PTO-1449 (Revised)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007001	Application No. 10/623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))		Applicant Klaus Höhn et al.	
		Filing Date July 21, 2003	Group Art Unit

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
Q AA							

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
Q AB								
Q AC								
Q AD								
Q BAE	6-69546	03/11/1994	Japan				X	
Q BAF	11-220174	08/10/1999	Japan				X	

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
Q AG		English Translation of Japanese 01175103 A, July 11, 1989.
Q AH		English Translation of Japanese 01260707 A, October 18, 1989.
Q AI		Phosphor Handbook, English Translation of (BAJ)
Q AJ		"Phosphor Handbook", Ohm 1987, pp. 275-276, 383.
Q AK		
Q AL		
Q AM		"Phosphor and Emitter", Osram GmbH, June 1997.
Q AN		
Q AO		
Q AP		English Translation of Japanese Patent Application No. 018010, Filed March 31, 1997, Nichia Chemical Industries Ltd.

Examiner Signature 	Date Considered 12/16/04
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Substitute Form PTO-1449 (Modified) 10/10/2003	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Klaus Höhn et al.	
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10/10/2003 U.S. PATENT & TRADEMARK OFFICE 37 CFR §1.10(b)			

U.S. Patent Documents

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	CAA						
	CAB						
	CAC						

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	CAD							
	CAE							
	CAF							
	CAG							
	CAH							

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	CAI	
	CAJ	
	CAK	English translation of Nikkei electronics, September 23, 1996, no. 671, "Nichia Chemical starts the sample shipment of white Light Emitting Diode".
	CAL	
	CAM	Schlotter, P. et al., "Luminescence conversion of blue light emitting diodes", <i>Applied Physics A</i> , vol. 64, February 27, 1997, pp. 417-418.
	CAN	
	CAO	
	CAP	Material Safety Data Sheet, pp. 1 and 2, and Lamp Phosphor Data Sheet of Phosphor NP-204 of Nichia Corporation.
	CAQ	
	CAR	
	CAS	
	CAT	

Examiner Signature	Date Considered
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Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 101623,819
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))		Applicant Klaus Hohn et al.		
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U.S. Patent Documents

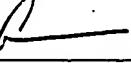
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G	D AA	5,998,925	12/1999	Shimizu et al.	313	503	
G	D AB	6,066,861	05/2000	Hohn et al.	257	99	
G	D AC	5,707,549	01/1998	Matsukiyo et al.	252	301.4R	
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	D AE						
	D AF						
	D AG						
	D AH						
	D AI						
	D AJ						
	D AK						

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
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G	D AL	JP 7-176794	04/1998	Japan				
G	D AM	WO 98-12757	03/1998	WIPO				
G	D AN	90 13 615.2	01/1991	Germany				X
G	D AO	38 04 293 A1	08/89	Germany				X
G	D AP	26 42 465	03/1978	Germany				X
G	D AQ	0 039 017 B1	11/1981	Europe				X
	D AR	07-176794	07/1995	Japan				X
G	D AS	9-73807	03/1997	Japan				X
	D AT							

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	
G	D AU	Translation of Proceedings of 264 th Institute of Phosphor Society, "Development and Application of High Bright White LED Lamps", Nov. 29, 1996, pg's. 5-14. (previously submitted)

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Substitute Form PTO-1449 (modified) E JC10 NOV 10 2003 PATENT & TRADEMARK OFFICE	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12406-007002	Application No. 10/623,819
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Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	
C	D AV	Translation of Japan 52-40959 (previously submitted)

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Information Disclosure Statement by Applicant <small>(Use separate sheets if necessary)</small> <small>(37 CFR §1.98(b))</small>		Applicant Klaus Hohn et al.			
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U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
G	AA	5,424,573	06/13/1995	Kato et al.			
G	AB	5,432,358	07/11/1995	Nelson et al.			
	AC						
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Foreign Patent Documents or Published Foreign Patent Applications							
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation
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	AL						
	AM						
	AN						
	AO						
	AP						

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
G	AQ	Abstract of JP 4110236, April 10, 1992, Japan.
G	AR	Abstract of JP 6085314, March 25, 1994, Japan.
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	AT	

Examiner Signature <u>G</u>	Date Considered 12/15/04
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